TRANSACTIONS

OF THE

NEW YORK SURGICAL SOCIETY.

Stated Meeting, April 12, 1905.

The President, HOWARD LILIENTHAL, M.D., in the Chair.

ENORMOUS SARCOMA OF BREAST.

DR. HOWARD LILIENTHAL presented a woman, aged twenty-nine years, who was admitted to Mt. Sinai Hospital on February 24, 1905. About six years before her admission she first noticed a small, painless mass, about the size of a marble, in the right breast. This mass rapidly grew in size, especially during the year prior to her admission. There had been no loss of flesh or strength.

On admission, a mass was found involving the whole right breast. It was about the size of an adult head. Its surface was nodular because of the presence of projecting lobules, some of which felt soft, others hard. The tissue between the lobules felt cystic in some places, firm in others. The tumor was adherent to the overlying skin, which was of a bluish-red color, and contained many dilated veins. The whole mass was attached to the breast by a flat pedicle, six inches wide and three-quarters of an inch in thickness. A few small, soft glands were felt in the right axilla. The left breast was normal.

On March 1, 1905, a radical amputation of the breast was done, the pectoral muscles being removed and the right axilla cleaned out. The mass at the time of its removal weighed seven and one-half pounds. The operation was attended by an unusual amount of hæmorrhage, which might be expected in the removal of a growth of such dimensions. The pathologist,

Dr. F. S. Mandlebaum, pronounced it a myxosarcoma, with cystic degeneration. The patient made an uninterrupted convalescence, and was discharged eighteen days after the operation.

URETERAL CALCULUS; TWO CASES.

DR. JOHN F. ERDMANN presented a man, twenty-nine years old, who first came under his observation on the first day of March, 1905. He gave a history of having had a pain in the right side for three or four years. The pain was paroxysmal in character, and at times uncontrollable. His last attack had occurred about five weeks before, and had necessitated his going to bed for twenty-four hours. At no time had he been bedridden for a longer period than this. Vomiting sometimes occurred during the attacks, and he also stated that they had been accompanied by jaundice of the face. He complained of pain in the region of the right kidney and extending down towards the bladder. At the time of voiding urine he would have a peculiar pain in the bladder, but there were no symptoms pointing to the genital organs. He was constipated, and also complained of pain in the region of the appendix.

Examination of the abdomen did not give any pronounced evidences upon palpation. In fact, there was no sensitive spot on pressure anywhere over the body. A tentative diagnosis of ureteral stone was made. The patient was X-rayed by Dr. Caldwell, and the plate showed a large shadow midway between the spine of the ischium and the sacro-iliac synchondrosis, in the region of the right ureter. The shadow was seven-eighths of an inch long, seven-sixteenths of an inch wide at its widest point, and shaped like an olive pit.

Operation, March 11, 1905. An incision was made beginning at the inner portion of the right rectus muscle, and extending outward with a very slight curve to and above the anterior superior spine of the ilium. The peritoneum was accidentally punctured, and feeling that no harm could be done by making a transperitoneal examination, and that thereby the operation could be more rapidly terminated, the opening in the peritoneum was enlarged. Through this opening the stone was readily palpated. Before dissecting back the peritoneum for a retroperitoneal operation, the appendix, which was found to be adherent and sclerosed, and showed evidence of earlier disease, was re-

moved. The peritoneum was then dissected up and the ureter exposed. By keeping two fingers within the peritoneal cavity, Dr. Erdmann said he was able to hold the stone in such a position that incision of the ureter retroperitoneally was readily accomplished. The stone was extruded through a longitudinal incision which was closed with silk sutures, the peritoneal wound was closed, and a cigarette drain was placed behind the peritoneum down to the site of the ureteral wound. The abdominal wound was closed, with the exception of the site of the retroperitoneal drain. The patient made a perfect recovery, and left the hospital on the fourteenth day. The urine, which was bloody on the first and second days, cleared up on the third. The patient had not complained of any of his former urinary difficulty since the operation.

DR. ERDMANN presented, also, a man, twenty-three years old, who stated that six months ago he had a pain in his abdomen extending well into the back. He had had several attacks of pain resembling that of appendicitis, necessitating his remaining in bed for anywhere from one to four days at a time. Three days ago he had an attack which was ushered in by vomiting and pain in the abdomen. He also complained of pain in the right side of his back. This last attack had kept him in bed for two days. He had suffered continuous pain from twelve at night to early morning of the following day. He also had attacks of pain that would manifest themselves in the glans penis, but not in the testes.

Upon examination, the abdomen was found to be extremely sensitive in the high appendicular region, and there was also pain by bimanual examination over the right kidney. The patient was X-rayed twice, four plates being taken. In one of these, a small shadow located at a point opposite the ischial spine in the pelvis was taken for a stone in the ureter, but the physical signs and the urine analysis tended to negative that diagnosis. An incision similar to that employed in the preceding case was made. The skin was retracted in the course of the rectus, and the anterior layer of the sheath of the rectus was cut in the line of the skin incision, so that a separation of the muscle fibres of the abdominal wall could be produced. The peritoneum and deep fascia were cut in the axis of the rectus. Exploration revealed a hard nodule, like a gland, within an inch of the bladder wall.

The appendix was congested and bound by numerous adhesions. The pelvic peritoneum was loosened from the deeper structures and the ureter exposed. It was then seen that the small, hard body was a calculus of the ureter, within an inch of its bladder orifice. The ureter was incised in its long axis and the stone extruded. The ureteral opening was then closed with silk, the peritoneum dropped back, the appendix removed, and the peritoneal wound closed after the kidney had been palpated, with negative results. A drain was then put down to the incision in the ureter, and the external wound completely closed, with the exception of the point of the drain. The operation occupied about forty minutes. The stone was seven-sixteenths of an inch long, five-sixteenths of an inch at its widest point, and three-sixteenths of an inch thick. It was of an irregular mulberry shape.

TETANUS FOLLOWING INTERVAL OPERATION FOR APPENDICITIS, WITH ASEPTIC HEALING OF WOUND.

DR. WILLY MEYER presented a man, twenty-seven years old, who was admitted to the German Hospital on January 21, 1905. Seven weeks before he had an attack of appendicitis, characterized by chills, fever, and pain in the right side of the abdomen.

A week ago he again had an attack of pain in the region of McBurney's point, accompanied by chills and fever. There was no vomiting. Since the onset of the attack his pain had grown worse, and he also complained of severe frontal headache. His appetite was poor; the bowels constipated.

Examination showed a well-developed man, whose general condition was good. There was no dyspnœa nor jaundice. There were a few herpes on the upper lip. Lungs and heart negative. The abdomen was not distended. There was slight tenderness in the right iliac region, and pressure over McBurney's point elicited some pain. No mass could be felt. The liver and spleen were not palpable. A rectal examination was negative. The patient's temperature on admission was 105.4° F.; pulse, 128; respirations, 28.

Operation, February 2, 1905. The appendix was removed by the rectus incision. It was covered by adhesions, and somewhat injected. The stump of the appendix was inverted by purse-string suture covered with three Lembert sutures. The abdomen

was closed in layers. The wound healed by primary union, and the silkworm-skin sutures were removed on February 9.

On February 12 the patient complained of some inability to open his mouth, and on the following day he had a marked spasm of the masseter muscles on both sides. The teeth could only be slightly opened, and the patient complained of pain on both sides of the jaw. A 3 per cent. carbolic acid solution was injected every two hours. On February 14 the trismus was more marked. There was slight rigidity of the neck muscles and pain in the back of the neck. The eyebrows were elevated, due to contraction of the orbicularis. Risus sardonicus was noticeable. The abdomen was rigid. On this day, intraspinal injections of antitoxin serum were begun by Dr. Meyer. On the following day the patient was able to open his mouth about 3 centimetres. The abdomen was still rigid. There was marked spasm of the muscles and some pain on pressure over the abdominal scar. Three days later the patient had a clonic spasm lasting three minutes. On the following morning he had two similar convulsions, lasting three and four minutes respectively. Assumed an opisthotonos position. Trismus was marked. There was great pain in the neck and considerable dysphagia. He could not retain nourishment per os, and rectal feeding was begun.

On February 21 the patient's condition was improved. The spasm of the neck muscles and the opisthotonos had entirely disappeared, but he still complained of a little pain in the neck. Trismus was not so intense. He took plenty of nourishment per os. He continued to improve, and on March 11 he was able to open his mouth so that three fingers could be admitted. There was still some spasm of the masseter muscles, but the abdominal rigidity was less marked. On March 15 he stated that he felt perfectly well. Trismus and the rigidity of the abdominal muscles had disappeared, and he had no more pain.

During the course of his illness, the patient had received four intraspinal antitoxin injections between February 14 and 17, the dose ranging from 5 to 15 cubic centimetres. Between February 15 and 21 he also received seven subcutaneous antitoxin injections, of 10 cubic centimetres each. Between February 14 and March 16 he was also given hypodermic injections of a 3 per cent. solution of carbolic acid, a syringeful every two hours. He

also received per rectum, from February 14 to 17, 3.0 of chloral hydrate in solution every four hours.

On February 19 blood cultures made from a small amount of serum collected below the sutured skin of the appendectomy wound gave a negative result.

Dr. Meyer said he had looked up the literature on this subject. In one of the most recent articles by Lanz and Javel there is a report of a pathological examination of 8 normal appendices and 138 diseased ones. In every instance in which the normal appendix was examined, quite a number of species of bacilli were found, especially the colon bacillus, then the bacillus of malignant œdema, and the pseudotetanus bacillus. In 10 per cent. of the 138 inflamed appendices, the result of the pathological examination was negative, showing sterility of organ, probably due to the work of the leucocytes. Dr. Meyer said the only explanation he could offer for the development of the tetanus in this case was that either the true or pseudotetanus bacillus was present in the appendix, and handling the organ caused the absorption of the micro-organism from the intestinal tract.

CARCINOMA OF THE MALE BREAST.

DR. WILLY MEYER presented a man, forty-six years old, who had been operated on in July, 1903, for carcinoma of the left breast. The radical operation was done as devised by Dr. Meyer ten years ago. The skin incision, as employed during the last seven years, commenced at the insertion of the pectoralis major tendon, passed about one inch and a half above its axillary border, and swept around the breast, forming two large flaps, an upper and a lower, ending beyond the middle of the sternum. By his method, one worked towards the sternum instead of away from it, and the entire pectoralis major was removed. By cutting the tendon of that muscle at the outset, one had, of course, to remove the entire belly of the pectoralis major, and gained immediate access to the main vessels feeding the breast. Immediate skin grafting was always resorted to.

Up to the present time, this patient showed no signs of a recurrence, and the functional result, so far as motion in the arm was concerned, was perfect. There was some œdema of the forearm.

DR. LILIENTHAL said the method of operation described by

Dr. Meyer had also been followed in the case of enormous sarcoma of the breast that he had shown, and excellent motion of the arm had resulted.

STRANGULATED UMBILICAL HERNIA.

DR. JOSEPH A. BLAKE said that during the past winter he had operated on four cases of strangulated umbilical hernia, and one case of strangulated relapsed umbilical hernia, all occurring in his service at the Roosevelt Hospital, a remarkable number for so short a period, considering the rarity of the condition.

One patient, a woman fifty-one years of age, was in such an advanced stage of chronic nephritis, emphysema, and mitral disease, that she could not lie down, and was operated upon in a half-reclining position under Schleich infiltration anæsthesia.

Owing probably to the diminished vitality of her tissues, suppuration occurred about the chromicized gut sutures in the depth of the wound, and extended to the peritoneum, causing her death on the tenth day after operation. The remaining cases, which recovered, were as follows:

CASE I.—L. M., a woman forty-one years of age, was admitted on November 21, 1904. She had been operated upon three years previously for an umbilical hernia. A relapse had been noted for a year and a half. Six days before admission, symptoms of strangulation had appeared, and continued without remission up to admission.

The patient's weight was estimated to be between 250 and 300 pounds. Examination revealed a very large protrusion in the region of the umbilicus, measuring nine inches in a vertical by fourteen inches in a horizontal direction. The mass was tense and sensitive; the skin was reddened in places, and distinct gaseous crepitation was evident; fever was present; the pulse was 116 and rather feeble.

Under nitrous oxide and ether anæsthesia, a transverse elliptical incision, six by fifteen inches, was made, and the sac opened. The contents consisted of the transverse colon and great omentum, and running in and out, in an indescribable manner, through the latter and between bands of scar tissue which in places was half an inch thick, was a loop of small intestine, distended and necrotic in several places. The mere freeing of this loop took nearly an hour.

Sixteen inches or more of this loop were resected and the ends joined by suture. The major part of the omentum was removed with the sac, the remainder being used to help close the aperture, a radical operation being impossible.

The patient developed severe asthma after the operation, so that for four days she had to sit up in order to breathe, and her condition was very precarious. This subsided under antispasmodics and cupping, and she eventually made a good recovery, being discharged cured on the forty-fourth day.

CASE II.—K. R., a woman of fifty-five years, was admitted on the same night as the previous patient. She had had a small reducible umbilical hernia for five years.

Three days before admission, she had had an attack of severe pain in the hernia, which became irreducible. The bowels had acted on the following day, after taking castor oil, and again on the next day, spontaneously. She had not vomited.

Operation was delayed for thirty-six hours on account of the absence of signs of obstruction and was then performed on account of the increasing signs of inflammation of the hernia. A probable diagnosis of a partial enterocele (Richter's hernia) was made. Operation revealed this to be the case, less than half the circumference of the bowel having been caught and strangulated, resulting in necrosis of an area of about the size of a quarter of a dollar. There was no omentum in the sac. The necrotic area was infolded by a few Lembert stitches, and the gut was dropped back into the peritoneal cavity. The abdominal wall was repaired by lapping from above downward, according to Mayo's method. Recovery was uneventful.

CASE III.—B. McL., a woman fifty-seven years of age, was admitted on February 15, 1905. She had had an irreducible umbilical hernia for fifteen years, which had gradually increased in size to that of a child's head. There had been repeated attacks of obstruction, which had been relieved by cathartics.

For three days before admission there had been symptoms of strangulation, persistent vomiting, complete obstipation, distention, and rapid increase in the size of the tumor to that of a foot-ball.

On admission she was markedly prostrated; the heart's action was rapid and feeble; there were sonorous and sibilant râles over both lungs. The hernia was tense, tender, and irre-

ducible; the skin was reddened; tympany was present, and gurgling was elicited.

Under nitrous oxide and ether anæsthesia, a transverse elliptical incision was made, and the sac opened. The contents consisted of omentum and small intestine.

The latter was devitalized in many places from pressure from the bands and septa in the sac. It was also widely adherent. After it was freed its condition was so questionable, that, although it was not distinctly gangrenous, it was decided to excise the entire loop. This was done, forty-eight inches being removed, and the ends were united by suture.

Radical cure by the vertical lapping method was done. The patient made a good recovery.

CASE IV.—B. M., a woman fifty-one years of age, was admitted on March 15, 1905. During the six months preceding her admission, she had had several attacks of pain situated in the umbilical region, which were accompanied by vomiting. No hernia had been discovered. The attacks had all been transitory.

Four days before admission she had a similar attack, excepting that the vomiting persisted, and obstipation was complete. Examination revealed a very small umbilical hernia, almost hidden in the fat of the abdominal parietes. It was tender and the skin was somewhat discolored.

Under nitrous oxide and ether anæsthesia, a transverse elliptical incision was made; the small sac was opened, and a short loop of gut was found, strangulated but viable. It was reduced. The sac did not contain any omentum.

A radical cure by the Mayo method of vertical lapping was performed. Recovery was uneventful.

In summing up, Dr. Blake said that he preferred the operation of vertical lapping in cases where time was a factor, and in cases in which the diastasis of the recti was not marked. When diastasis was marked and the abdominal walls were loose and flaccid, he preferred transverse lapping. In all cases of intestinal resection, particularly in asthmatic patients, he preferred suture to union by mechanical aids.

DR. LILIENTHAL said that in one of Dr. Blake's cases, the second one he had reported, an area of necrosis about the size of a silver quarter was infolded by a few Lembert's stitches and the gut was dropped back into the peritoneal cavity. The speaker

asked Dr. Blake whether he considered this a safe procedure? In most of those cases where there was a suspicious gangrenous area, the process was likely to have extended beyond the actual limits of the lesion, and he thought a liberal resection would be the safer method.

DR. BLAKE, in reply to Dr. Lilienthal, said that in the case referred to, the small necrotic area was on the opposite side of the mesentery, and the strangulation only involving that side of the gut, the circulation in the rest of the gut was unimpaired.

RUPTURE OF THE SMALL INTESTINE.

DR. JOSEPH A. BLAKE presented a man, thirty-eight years of age, upon whose back a heavy bureau had fallen, knocking him to the floor, so that he struck upon his abdomen.

He immediately experienced a severe pain across the back, and vomited. He was, however, able to walk home, a short distance away. On reaching home the pain became abdominal and was very severe. There was persistent vomiting and obstipation. Fifteen hours after the injury he was admitted to the Roosevelt Hospital, with all the signs of a diffuse peritonitis. His temperature was 101.6° F.; pulse, 112; respirations, 48.

Operation was performed two hours after admission, seventeen hours having elapsed since the injury.

A well-marked seropurulent general peritonitis was present. Twelve inches from the ileocolic junction the ileum was contused, and in the centre of the contusion there was an aperture five-sixteenths of an inch in diameter, from which the intestinal contents were exuding.

The area was inverted by means of Lembert stitches, the peritoneal cavity thoroughly washed out and closed, a short cigarette drain having been introduced, reaching barely into the peritoneal cavity. The wound was repaired by a tier suture. Infection occurred in some of the skin sutures, and on the ninth day the patient, who had developed bronchitis, burst the superficial part of the wound open in a fit of coughing; otherwise, convalescence was uneventful.

SPLENECTOMY.

DR. JOHN A. HARTWELL presented a boy, aged twelve years, who was admitted to the Lincoln Hospital on March 1, 1905.

The history obtained was that he had fallen about fifteen feet, striking directly on his left side on a piece of timber. He suffered considerable local pain, but was able to walk home, where he was seen by a physician. On the following day he was so much better that the physician was notified not to call, but on the third day the doctor was again called because the boy complained of considerable pain in the abdomen, rather localized on the left side. It was aggravated by pressure and deep breathing. The boy had vomited once.

The patient's temperature on admission, forty-six hours after injury, was 100° F.; pulse, 88; respirations, 24. He was poorly nourished and somewhat anæmic. The respiration was thoracic in character. There was some abdominal distention, with generalized pain and rigidity, but more marked over the upper left quadrant. In the left lumbar region, at the costal margin, a mass was palpable. It was very tender. There was also pain on pressure over the lower four or five ribs. The child was most comfortable when lying on his back, with his legs drawn up. The leucocytosis was 20,000.

Operation.—An exploratory incision, two-and-a-half inches long, was made parallel with the outer border of the left rectus, beginning at the costal margin. The peritoneum was opened, and its cavity found to contain free blood. The wound was thereupon enlarged by a transverse incision outward, and the spleen brought into view. After removing the adherent omentum, a fracture of the spleen, penetrating one-third the organic thickness through the hilus, was found. The splenic vessels were caught in a single large clamp, and tied, and the spleen was then removed, leaving the clamp *in situ*. The abdominal cavity was repeatedly washed out with saline solution, and, as the fluid continued to return blood-stained, a further examination was made, which revealed a rent in the posterior abdominal wall and a slight laceration of the left lobe of the liver. This was checked by packing with gauze. The wound was closed in the usual manner, leaving the clamp on the splenic vessels undisturbed.

When the clamp was removed on March 6, five days after the operation, there was no hæmorrhage. The patient's recovery was uneventful, with the exception of a slight phlebitis of the left femoral vein, which developed on March 30.

Dr. Hartwell said the following blood counts were of inter-

est in connection with the case. On March 3, two days after the operation, there were 3,720,000 red blood-cells, 27,000 white cells, and 90 per cent. hæmoglobin. Polynuclears, 85.5 per cent.; mononuclears, 9 per cent.; lymphocytes, 5 per cent.; basophiles, 0.5 per cent. On March 7, red cells, 4,400,000; hæmoglobin, 95 per cent.; white cells, 24,000; polynuclear, 92 per cent.; mononuclears, 4 per cent.; lymphocytes, 3 per cent.; eosinophiles, .5 per cent.; basophiles, .5 per cent. On March 16 there were 4,100,000 red blood-cells, 18,000 white cells, and 95 per cent. of hæmoglobin. Polynuclears, 82 per cent.; mononuclears, 12 per cent.; lymphocytes, 5.5 per cent.; eosinophiles, 0.5 per cent. On April 12 the red blood-cells numbered 5,244,000; the white cells, 24,000; hæmoglobin, 90 per cent; polynuclears, 62 per cent.; lymphocytes, 24 per cent.; mononuclears, 12 per cent.; eosinophiles, 1 per cent.; basophiles, 1 per cent.; no normoblasts nor poikilocytes were found. The red cells were normal in size, and well colored. The presence of suppuration in the wound around the clamp and drain probably had some effect on the leucocytosis, though this was 20,000 prior to operation.

In presenting this patient, Dr. Hartwell raised the query whether in a case of this kind, which was in such good condition at the end of forty-eight hours, it was better to operate as he had done, or treat the case expectantly, with the hope that the bleeding would cease spontaneously, as was recommended by some authorities?

Dr. Benjamin T. Tilton thought that in cases of suspected laceration or rupture of the spleen, it was advisable to make an exploratory incision, and act according to the condition met with. Unless the abdomen was opened, one could never tell how severe the injury was. He recalled one case where a man, after an abdominal injury, walked about for four days before he felt obliged to seek medical advice. He was immediately operated on, and the abdomen was found filled with blood, which was traced to a ruptured spleen. A splenectomy was done, but the outcome was fatal.

SPLENECTOMY FOR GUNSHOT WOUND OF SPLEEN.

Dr. L. W. Hotchkiss reported the case of a negress, twenty-one years old, who was admitted to the J. Hood Wright Hospital on April 3, 1905, shortly after being shot at close range by a

.32-caliber revolver. On admission, the patient was in moderate shock, and presented a small wound in the left anterior chest wall, near the cartilage of the tenth rib. On the same side, posteriorly, there was a hæmatoma: this was about three inches from the spine, at a point corresponding to the eleventh rib, and beneath it the bullet could be felt. Her condition on admission was so good that it was first thought the wound was not a penetrating one. About two hours later, the patient's only complaint was of pain near the site of the wound, and in the upper part of the abdomen. There was, however, well-marked spasm of the abdominal muscles, and tenderness over the upper left abdominal segment. The pulse was somewhat rapid. Percussion over the left chest was negative. An immediate operation was advised and performed.

A vertical incision was made over the site of the wound and extended downward through the outer fibres of the left rectus muscle to the level of the umbilicus, and the peritoneum opened. The track of the ball passed backward between the cartilages of the ninth and tenth ribs, through the diaphragm, thence in and out of the anterior wall of the transverse colon, wounding the tail of the pancreas, then passing through the spleen and out through the diaphragm posteriorly, fracturing the eleventh rib. The bullet finally lodged in the soft parts about this rib, and was not altered in shape.

As soon as the peritoneum was opened, free blood and clots escaped, but there seemed to be no fresh hæmorrhage. A rapid search was made of the various abdominal viscera, and two bullet holes were found on the anterior free surface of the transverse colon, about three inches apart, and fairly well sealed by the prolapsed mucosa. These were closed by purse-string sutures, fortified by an overlying Lembert stitch. Several large clots were washed out of the splenic pouch of peritoneum, and on examination of the spleen, which was readily pulled up through the wound, it was found to be perforated from within outward by the bullet, which had passed through from a point on the antero-internal surface, just in front of the hilum and about the middle of the organ, to the middle of the external surface, and thence through the diaphragm, fracturing the eleventh rib. The bullet could be felt through the hole in the diaphragm lying with fragments of the fractured rib beneath the skin. There was no wound of the

small intestines, but the tail of the pancreas was partially shot through transversely, and there was some oozing from that organ. After ligating the gastrosplenic omentum, the spleen was removed, and it was thought best to close the anterior wound and drain posteriorly this wound in the pancreas. Accordingly, an incision was made over the fractured rib behind, and its fragments were removed, together with the bullet. Through the hole in the diaphragm the packing of gauze in the pancreatic wound was led out, the wound being enlarged downward through the diaphragm for this purpose. As the pleural cavity was opened, the upper end of the diaphragmatic wound was closed, and an attempt made to exclude the pleura from the abdominal drainage opening by suturing the diaphragm to the parietal pleura and packing it with a separate string of gauze. The patient was infused with hot saline solution during the operation, and left the table in fair condition. On the following day the patient's condition seemed somewhat improved, though the respirations were very rapid and the embarrassment of respiration painfully evident. Water was taken by mouth, and there was no vomiting.

On April 4, on account of the oozing, the outer dressings had to be changed. The abdominal packing and the wick to the site of the pleural opening were withdrawn, and replaced by small drainage strips of gauze. There was free oozing of bloody serum into the dressings.

On the following day, the patient's temperature was higher. There was free oozing into the dressings, which had to be changed twice daily. There was considerable odor to the discharge from the site of the pancreatic wound, and the gauze was stained with a light, brownish, foul-smelling fluid.

On April 6, œdema of the lung developed and the patient died. The autopsy showed that the left lung was completely collapsed, and the left pleural cavity partly filled with blood-stained serum. The peritoneal cavity also showed some sero-sanguinous fluid in the pelvis, and in the lesser sac, about the pancreas, some yellowish, foul fluid was found. There was no extending peritonitis, and no other wounds of the intestine or other viscera were found.

RUPTURE OF SPLEEN.

Dr. Hotchkiss showed a spleen which had been removed at operation about a week before. This was the third splenectomy

that had been under the speaker's care since February of the present year; two of them had occurred within one week.

The patient was a male, twenty-three years old, who was admitted to the J. Hood Wright Hospital on April 5, 1905, with the history of having fallen with a section of concrete flooring through four stories of a building on which he was at work, striking against various beams and obstructions in his descent. When first seen by the ambulance surgeon, he did not seem to be much injured, and declined to go to the hospital, but was finally persuaded to do so. Shortly after reaching the hospital he began to complain of severe abdominal pain, and when seen by Dr. Hotchkiss, shortly afterwards, he was drawn up in bed and complaining of intense pain. He had not vomited. Bloody urine had been withdrawn from his bladder by catheter. The abdominal rigidity was well marked, and the abdomen was quite tender, especially over the left side. A diagnosis of probable rupture of a solid abdominal viscus, with resulting internal hæmorrhage, was made, and, as the patient was in a condition of shock, and the rigidity of his abdominal muscles was suggestive of serious internal damage, an immediate operation was decided on, and performed about two hours after the accident.

Operation.—Under gas and ether anæsthesia, a left median incision was made through the fibres of the rectus. When the peritoneum was opened, dark blood in large amounts poured out. Immediate search was made for the spleen, but as the organ was large and its lower two-thirds uninjured, the damage to it was not at first clearly made out. As the blood welled up from the pelvis, the incision was extended downward and the bladder and kidney palpated. As no gross rupture of these organs could be made out, the spleen was re-examined and found to be completely ruptured at a point above its middle. There was a loose middle fragment which came away with the hand, and an upper fragment consisting of the upper pole of the organ, which was attached by some adhesions to the diaphragm. There was also a small loose piece which was washed out of the pelvis by the stream of saline solution.

The remains of the organ, consisting of the lower two-thirds, was pulled into the wound, its omentum ligated, and easily removed. The upper fragment was peeled off the diaphragm and also removed. The left kidney was again carefully palpated

and did not seem to be ruptured. As no further injuries were found, the abdominal wound was closed after partly filling the cavity with warm saline solution. Patient returned to bed in rather extreme shock, from which he soon rallied.

The course of convalescence ran smoothly enough until the seventh day, with the exception of a cough, when on account of tension the sutures were removed. The day following, the wound was found to have reopened and some intestine and omentum to be protruding. He was taken to the operating room, etherized, and the prolapsed intestine and omentum returned and the wound tightly sutured. It was found at this operation that the adhesions between some of the coils of gut were of considerable extent, and the freeing of these coils necessarily left several areas denuded of peritoneum, which areas were covered as far as possible with Cargile membrane, although some of the latter became displaced when the intestines were returned.

Five days later the patient developed signs of acute and complete intestinal obstruction, for which operation was promptly done April 17. The acute angulation of adherent loops of small gut was found responsible for the condition, and these bands and adhesions were divided as speedily as possible; but the patient succumbed to the shock of operation and died about two hours later.

DR. LILIENTHAL said that in one case of rupture of the spleen that had come under his observation, he temporarily checked the hæmorrhage by packing the wound with gauze, but the patient died. He thought Dr. Hartwell acted rightly in removing the spleen in the case he showed, as it was impossible to accurately determine the nature of the injury without loosening the adherent omentum, and having once done that, and encountered bleeding, nothing remained but to remove the spleen.

DR. ERDMANN said that about a year ago he saw a child under five years old with a transverse rupture of the spleen, near the hilum. He closed the rupture by putting in four sutures, and the child recovered. In another case seen one month previous to that in the service of Dr. J. E. Kelly, in which there was multiple laceration and fragmentation of the spleen, the organ was removed and the child recovered.

DR. BLAKE said he had obtained good results in treating these cases by packing the wound and leaving the spleen. He

did not think it was necessary in all cases to remove the organ. In certain cases, however, where the rupture was near the hilum, efficient pressure was impossible, and under those conditions removal of the spleen was advisable.

DR. GEORGE WOOLSEY said that about eighteen months ago he saw a case of hæmorrhage of the spleen following injury. The patient was an Italian, who gave a history of malaria. The spleen was enlarged and somewhat adherent, and, as the bleeding could not be satisfactorily controlled by packing, the organ was removed. The patient died. Packing of the ruptured spleen seemed to the speaker to be a difficult matter, unless it were possible to retain the packing by temporary catgut sutures.

FRONTAL SINUS SUPPURATION.

DR. ROBERT H. M. DAWBARN presented a man of fifty years of age who was brought to him by Dr. J. A. Hays, of New York City, with a history of having suffered from this disease for at least five years.

Operation.—The eyebrow was shaved and split along the orbital edge as far out as the supraorbital vessels and nerve. The more usual vertical skin-incision up the forehead, leaving a very perceptible scar, seems quite unnecessary. Next, the cavity was freely exposed by use of a coarse dental drill followed by a rongeur; this opening being just below, instead of involving, the orbital edge, to prevent a subsequent sinking in of the eyebrow. Next, instead of the customary passage, by force, of a forceps, somewhat along the infundibulum, crushing delicate bones to make room for a rubber drainage-tube, Dr. Dawbarn used the plan which he originated many years ago, which is illustrated by a wood-cut in Dr. George R. Fowler's article upon "Frontal Sinus Disease" in Wood's Reference Hand-Book; namely, by a peculiar bending of a probe it is passed without any force down the infundibulum and out at the nostril. This can with practice almost always be accomplished, although occasionally it may require a few minutes' manipulation, and slight modification of the shape given the probe. (Filling the infundibulum beforehand for a few minutes with dilute adrenalin chloride and cocaine solution, by greatly overcoming congestive obstruction due to the inflamed mucous membrane, facilitates this step, of course.)

A stout thread is next tied behind the knob of the probe, and drawn through; and, finally, by the aid of this thread a piece of soft rubber catheter, well fenestrated, is drawn down into place for effectual drainage.

After the discharge has almost ceased, the upper end of this tube is shortened well down, and the split eyebrow freshened and united. Finally, perhaps a fortnight later, the remainder of the tube is withdrawn through the nostril.

Attempts to convey drainage from below upward through the infundibulum are rarely successful; and a fatal case, due to piercing the brain through softened bone while using a stiff instrument in such an endeavor, is recorded in several text-books.

MALPOSITION OF THE APPENDIX AS A CAUSE OF FUNCTIONAL DISTURBANCES OF THE INTESTINE.

DR. JOSEPH A. BLAKE read a paper with the above title, for which see page 394.

DR. WILLY MEYER said his experience had convinced him that malposition or kinking of an uninflamed appendix was not of rare occurrence. He could recall a number of cases where the symptoms pointed to appendicular trouble, and where the patients were entirely relieved by removing a seemingly normal appendix with a short meso-appendix. The symptoms this condition gave rise to were apparently of a reflex character. Such patients frequently complained of more or less continuous pain, sometimes mild, at other times severe, but did not have a frank attack of appendicitis. In some instances, the speaker said, he had been led to suspect this condition, and he had expressed the opinion to the patients that there was something wrong in the anatomical condition of the appendix. He could recall cases where he found nothing but peri-appendicular adhesions to the cæcum, which were easily peeled off. The reflex symptoms in these cases were sometimes referred to the epigastrium, and were often very vague in character.

DR. JOHN B. WALKER said that in operating on interval cases of appendicitis, it was not uncommon to find the appendix in a malposition. In a case seen only a few days ago the patient was a woman of thirty years, who gave a history of three previous attacks of appendicitis. There was abdominal tenderness, more or less generalization, with slight distention. The leuco-

cyte count was 25,000. The usual incision for appendicitis was made, but the appendix could not at first be located, it not being in the normal region. Further investigation with the finger disclosed the tip of the appendix very high up, at a level with the lower pole of the right kidney. A second incision was made at the outer border of the right rectus from the edge of the ribs downward. The appendix was gangrenous and was removed. Both wounds healed per primam.

DR. WOOLSEY said that in one of the type of cases mentioned by Dr. Blake he thought the malposition of the organ was often due to adhesions from previous inflammation and not from congenital causes. He recalled a number of cases of malposition from adhesion, where he found the adherent appendix well up behind the cæcum and colon, dragging the cæcum itself out of position. About ten days ago he had operated on a member of the house staff of a hospital, and in that instance he found the appendix high up behind the ascending colon, and dragging the cæcum up and back. The history of these patients was not always typical of appendicitis; the classical signs of the disease were not all present, but removal of the organ seemed to effect a cure of the intestinal disturbance and of the local pain and tenderness.

DR. DAWBARN said the differential diagnosis between appendicitis on the one hand and right ovarian or tubal inflammation on the other hand was sometimes a difficult matter, and in examining such patients, the speaker said he had come to lay stress upon the following point: When, with the finger in the rectum, the tenderness was found towards the back of the rectum, it was due to inflammation of the appendix rather than of the ovary or tube,—the appendix in about one-fourth of the cases entering the pelvis,—whereas, if it (the tenderness) was in *front* of the rectum, it was due to the latter and not to the appendix. The rule was not infallible, but very helpful.

DR. LILIENTHAL said he had seen several cases in which constipation was a symptom of malposition of the appendix, and in which the constipation was entirely relieved after removal of the appendix for chronic inflammation. In one instance the appendix was up behind the outer side of the colon, and was not really inflamed, nor apparently had it been. In another case there had been one severe attack of appendicitis, from which the patient had entirely recovered. In both instances the constipation

was relieved by removal of the appendix. The explanation offered for the constipation in these cases was that the adhesions caused inhibition of the peristaltic action of the bowels.

DR. BLAKE, in closing, said that in some of these cases there was constipation, in others diarrhœa and fermentation. The complex of symptoms was hard to unravel at times. He thought it was reasonable that these symptoms were the result of a short meso-appendix. The cæcum, constantly tugging on the appendix and meso-appendix, might give rise to pain and discomfort, and it was perfectly rational to accept the theory that by remedying this condition we might relieve the symptoms.

INTUSSUSCEPTION OF SMALL INTESTINE.

DR. BENJAMIN T. TILTON presented a specimen removed from a child of nine months who forty-eight hours before admission began to show symptoms of intestinal obstruction, with the passage of blood per rectum. Examination showed very slight abdominal distention and rigidity, with some tenderness. High up on the right side, below the free border of the ribs, a small tumor could be distinctly mapped out. The child's general condition was poor. The pulse was feeble and rapid; temperature, 102° F.

An incision was made over the swelling, and the tumor exposed. It was found to involve the small intestine high up, and it was so movable that it was easily delivered through a small abdominal incision. It was found to consist of an invagination of the gut; as it was impossible to reduce it, a rapid resection was done, and the cut ends united with a small Murphy button. There was considerable shock, and the child survived about eight hours.

Dr. Tilton said the specimen seemed worthy of presentation on account of the rarity of intussusception confined to the small intestine.

DR. ERDMANN said he had never seen a recovery after resection of the gut in a child under one year of age, nor had he ever seen a case, although having now his thirty-first case, in which the small intestine alone was involved, as in the specimen shown by Dr. Tilton.